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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,522	09/08/2003	Raymond Bertholet	88265-6925	1947

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EXAMINER

BERKO, RETFORD O

ART UNIT PAPER NUMBER

1615

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/658,522	<b>Applicant(s)</b> BERTHOLET ET AL	
	<b>Examiner</b> Retford Berko	<b>Art Unit</b> 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                                |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/13/2004</u> . | 6) <input type="checkbox"/> Other: _____                                                |

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### ***DETAILED ACTION***

**Acknowledgement:** The Information Disclosure Statement filed January 13, 2004 is acknowledged.

#### **Status of Claims**

Claims 1-19 were on file and being evaluated.

#### **Joint Inventors**

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-6, and 17 are rejected under 35 USC Sec 102(b) as anticipated by Kyle et al (US 5, 407, 957)

The claims are drawn toward a stable oil containing one or more long chain polyunsaturated fatty acid (PUFA; up to 10% by wt) in the form of triglycerol wherein the long chain fatty acid is docosahexanoic acid (DHA), arachidonic acid, eicosapentanoic acid or

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docosapentanoic acid. The claims are also drawn toward the stable oil is rich in oleic acid or medium-chain triacyl glycerol. The claims are further directed toward a product containing stable oil comprising 10% wt polyunsaturated fatty acid.

As in claim 1-2, Patent granted to Kyle et al (US 5, 407, 957) teaches edible oil containing docosahexanoic acid present in a biomass of *Cryptocodinium cohnii* (1%) that is readily extractable with solvent (col 2, lin 26-35, lin 55-68, continuing to col 3, lin 1-5 and col 5, lin 47-65).

Similar to applicant's claim 4-6, Patent '957 teaches stable oil comprising docosahexanoic acid and oleic acid (col 5, lin 50-60), present in the form as triglyceride (col 7, lin 34-40 and col 8, lin 65).

As in applicant's claim 17, Patent '957 teaches food products (e.g. infant formula) comprising eicosapentanoic and DHA as the polyunsaturated fatty acids (col 6, lin 30-53).

Claims 1, 2, 4-6, and 17 are rejected anticipated by Patent '957.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-18 are rejected as unpatentable under 35 U.S.C. 103(a) over Kyle et al (US 5, 407, 957) in view of Akimoto et al (EP 0322 227) further in view of Cloughley et al (US 5, 871, 757).

The claims are drawn toward a stable oil containing one or more long chain polyunsaturated fatty acid (PUFA; up to 10% by wt) in the form of triglycerol wherein the long chain fatty acid is docosahexanoic acid (DHA), arachidonic acid, eicosapentanoic acid or decosapentanoic acid. The claims are also drawn toward the stable oil is rich in oleic acid or medium-chain triacyl glycerol. The claims are further drawn toward a process for preparing the stable oil, said process comprising addition of carrier oil to culture of microorganism containing the PUFA and separating the oil from biomass by pressing and filtration.

As previously discussed, Kyle et al (Patent '957) discloses a process for producing edible oil containing polyunsaturated fatty acids from the biomass of marine microorganism (abstract and col 5, lin 25-60). According to Kyle, following the culture of microorganism, the biomass can be processed by conventional oilseed processing equipment and methods comprising filtration, separation and distillation (col 5, lin 60-65 continuing to col 6, lin 1-25). Patent '957 discloses food products (e.g. infant formula) comprising the oil product having eicosapentanoic and DHA as the polyunsaturated fatty acids (col 6, lin 30-53).

Patent '957 does not teach details of experimental conditions for the process) for extraction of stable oil containing PUFA (e.g. temperature, or pressure, the use of inert conditions; col 6, lin 15-20).

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Akimoto et al (EP '227) discloses a process for production of edible oil containing bishomo-gamma-linolenic acid (C-18 PUFA) and arachidonic acid (C-20 PUFA) from microorganism (abstract, page 18, line 35-60). The reference is relied upon as disclosing several experimental conditions for making the product (see examples 1-14, pages 7-17).

Cloughley et al (Patent '757) discloses the stabilization of vegetable oils comprising PUFA. Patent '757 discloses the important concept known in the art that PUFA are highly susceptible to atmospheric oxidation and therefore are highly unstable when subjected to processing. Patent '757 discloses the method of obtaining stabilized oil comprising PUFA suitable for storage and consumption (col 1, line 25-45, col 2, line 50-60 and col 4, line 35-50).

One of ordinary skill in the art would be motivated to extract oils containing PUFA in a stable form from microorganism biomass for incorporation into food, cosmetics and pharmaceutical application by using a combination of procedures and process described in the prior art cited. One of ordinary skill would expect to obtain stable oil efficient production of oil (Patent '957, col 5, line 25-30) having desirable characteristics of increased concentration of PUFA with reduced susceptibility to oxidation (Patent '757, col 1, line 25-39, col 4, line 42-50 and col 6, line 5-10). Therefore the invention as a whole would have been prima facie obvious to one of ordinary skill at the time it was made.

### **Correspondence**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Retford Berko** whose telephone number is 571-272-0590. The examiner can normally be reached on M-F from 8.00 am to 5.30 pm

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Thurman K Page**, can be reached on 571-272-0602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rob  
2/1/05

  
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